

What is claimed is:

1. A printed wiring board comprising:
an insulating board which includes a plurality of
electrically insulating layers which are laminated;
5 an electronic component which is built in the insulating
board;
a signal transmitting lead which is provided at an
interlayer between the electrically insulating layers;
an auxiliary lead which is provided on the insulating board
10 while the auxiliary lead is not in electrical contact with the
signal transmitting lead; and
an electromagnetic shielding layer which covers at least
a part of the auxiliary lead.
2. A printed wiring board as claimed in claim 1, wherein
15 the electromagnetic shielding layer is made of a magnetic
material having magnetic loss.
3. A printed wiring board as claimed in claim 1, wherein
the auxiliary lead is connected to ground potential.
4. A printed wiring board as claimed in claim 1, wherein
20 an insulating film is provided between the auxiliary lead and
the electromagnetic shielding layer.
5. A printed wiring board as claimed in claim 1, wherein
the signal transmitting lead has lead regions which are opposite
to each other, and the auxiliary lead is provided between the
25 opposite lead regions.
6. A printed wiring board as claimed in claim 1, wherein
the auxiliary lead is provided between the signal transmitting
lead and the electronic component.
7. A printed wiring board as claimed in claim 1, wherein
30 the auxiliary lead is provided opposite to a component surface
in which strength of unnecessary radiation from the electronic
component is higher in both component surfaces of the electronic
component.

8. A printed wiring board as claimed in claim 1, wherein the auxiliary lead is provided opposite to a terminal forming surface of the electronic component.

9. A printed wiring board as claimed in claim 1, wherein
5 the auxiliary lead is provided opposite to the component surface located on a reverse side of the terminal forming surface of the electronic component.

10. A printed wiring board as claimed in claim 1, wherein
10 the auxiliary lead is provided opposite to the terminal forming surface of the electronic component and the component surface located on the reverse side of the terminal forming surface of the electronic component respectively.

11. A printed wiring board as claimed in claim 1, wherein the plurality of electronic components are provided, and the
15 auxiliary lead is provided between the plurality of electronic components.

12. A printed wiring board as claimed in claim 1, wherein the auxiliary lead is provided on a periphery of the electronic component so as to surround the electronic component.

20 13. A printed wiring board as claimed in claim 1, wherein the auxiliary lead comprises a first auxiliary lead which covers one of the surfaces of the electronic component and a second auxiliary lead which is provided on the periphery of the electronic component so as to surround the electronic component,
25 and
a conductor which electrically connects the first auxiliary lead to the second auxiliary lead is provided in the electrically insulating layer.

14. A printed wiring board as claimed in claim 13, wherein
30 the plurality of conductors are provided so as to surround a side face of the electronic component, and the conductors are arranged so, that opposite directions of the conductors which are adjacent to each other are unparallel to a width direction

of the side face of the electronic component and the opposite directions are intersected in sequence.

15. A printed wiring board as claimed in claim 1, wherein the electromagnetic shielding layer is provided on both surfaces
5 of the auxiliary lead.

16. A printed wiring board as claimed in claim 1, wherein an electromagnetic shielding layer which covers at least a part of the signal transmitting lead is further provided.

17. A printed wiring board as claimed in claim 16, wherein
10 both surfaces of the signal transmitting lead are covered with the electromagnetic shielding layer.

18. A printed wiring board as claimed in claim 16, wherein the insulating film is provided between the signal transmitting lead and the electromagnetic shielding layer which covers the
15 signal transmitting lead.

19. A printed wiring board as claimed in claim 18, wherein the signal transmitting lead is provided on both surfaces of the electrically insulating layer respectively, the conductor which connects the signal transmitting leads on both surfaces
20 are provided so that the conductor penetrates through the electrically insulating layer, and the insulating film and the electromagnetic shielding layer are arranged apart from the conductor.

20. A printed wiring board as claimed in claim 1, wherein
25 the electrically insulating layer is made of a composite material which is formed by mixing an epoxy resin and an inorganic filler.

21. A printed wiring board as claimed in claim 1, wherein the auxiliary lead is connected to the ground potential and a length of the electromagnetic shielding layer is set to one fourth
30 of a subject wavelength of suppression.

22. A printed wiring board as claimed in claim 1, wherein the length of the electromagnetic shielding layer is set to half the subject wavelength of the suppression.

23. A manufacturing method of a printed wiring board which includes an insulating board which includes a plurality of electrically insulating layers which are laminated, an electronic component which is built in the insulating board, a signal transmitting lead which is provided at an interlayer between the electrically insulating layers, an auxiliary lead which is provided on the insulating board in a state that the auxiliary lead is not in electrical contact with the signal transmitting lead, and an electromagnetic shielding layer which covers at least a part of the auxiliary lead, comprising the steps of:

preparing a transfer forming material and pattern-forming the auxiliary lead on the transfer forming material;

pattern-forming the electromagnetic shielding layer on the auxiliary lead layer on the transfer forming material; and

transferring the auxiliary lead from the transfer forming material to the electrically insulating layer by making the electromagnetic shielding layer about on the electrically insulating layer.

24. A manufacturing method of a printed wiring board as claimed in claim 23, further comprising the step of pattern-forming the electromagnetic shielding layer on the auxiliary lead layer which is transferred to the electrically insulating layer.